SCHOOL OF CIVIL ENGINEERING

INDIANA DEPARTMENT OF HIGHWAYS

JOINT HIGHWAY RESEARCH PROJECT

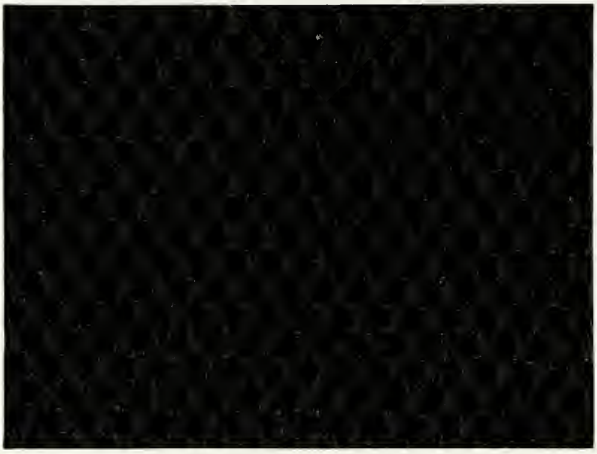
Traffic Report

JHRP-89/2

TRAFFIC SPEED REPORT NO. 122

David L. Cochran

PURDUE UNIVERSITY



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TRAFFIC SPEED REPORT NO. 122

To: Harold L. Michael, Director
Joint Highway Research Project

March 1, 1989

File: 8 - 3 - 3

From: David L. Cochran, Engr. Tech.
Joint Highway Research Project

Project: C - 36 - 10C

The attached Progress Report No. 122 is the report of the May-August 1988 study of free flow automobile and truck speeds on tangent, level and dry sections of rural interstate, rural 4-lane, rural 2-lane and urban interstate highways in Indiana. This report was prepared by David L. Cochran. Data were collected by David Cochran with the assistance of Leroy Gray and Don Genda.

The results of this report show that all types of vehicles, on all types of Indiana highways, had an average free flow speed of 59.3 mph in 1988. This is exactly the speed reported for all highways in 1987. If the two urban interstates are excluded, the average speed on all types of rural highways in Indiana becomes 59.4 mph in 1988. This represents an increase of 0.3 mph from 1987. All types of vehicles on rural interstate highways had an average speed of 62.9 mph, which is up by 0.6 mph from 1987 and only 2.8 mph from 1986. This is not unexpected, due to the implementation of the 65 mph speed limit on Indiana rural interstate highways effective June 1, 1987.

This report includes a chart, Figure 2 on page 8, that graphically summarizes the results of summer free flow speed monitoring on rural highways since 1979. Table 8, on page 9, summarizes the changes in speed in 1988 from 1987. Figures 3 thru 6, on pages 10 thru 13, illustrate the trends for each of the four highway categories. Table 9, on page 14, summarizes the changes in percent of vehicles exceeding 55, 60 and 65 mph in 1988 from 1987.

Copies of this report will be sent to the Indiana Department of Highways. Copies of this report are requested for release to the Indiana State Police and other highway safety agencies, which is normal procedure for these reports.

Respectfully submitted,

David L. Cochran

David L. Cochran
Traffic Research

cc: JHRP Board

TRAFFIC SPEED REPORT NO. 122

by

David L. Cochran, JHRP
Traffic Research

and

Leroy Gray and Don Genda
Traffic Technicians

Joint Highway Research Project
Project No.: C - 36 - 10C
File No.: 8 - 3 - 3

Prepared as Part of an Investigation
Conducted by

Joint Highway Research Project
Engineering Experiment Station,
Purdue University,

in Cooperation with the

Indiana Department of Highways

Purdue University
West Lafayette, Indiana 47907

March 1, 1989

TRAFFIC SPEED REPORT NO. 122

This report is an analysis of spot speed observations made during the 1988 summer months of May, June, July and August. All observations were made of free-flowing vehicles on level, tangent sections of rural and urban highways under favorable conditions. All observations were made during daylight hours.

This is the eighth report with exclusively summer observations since 1975. From 1976 until 1980 (Traffic Speed Reports #95 through #114), 14 primary and secondary stations, as well as another 14 randomly selected stations, were monitored every quarter in conjunction with the 55 mph speed compliance certification program performed for the Federal Highway Administration. Since 1981 the State and Federal studies have been conducted separately.

Fourteen speed monitoring stations were used for the 1988 Traffic Speed Report calculations. These stations are divided into four categories which include: four rural interstate locations, four rural four-lane locations, four rural two-lane locations and two urban interstate locations. These 14 stations are the same as the primary and secondary control stations monitored since 1975 in Indiana. Prior to 1975, only the 12 rural stations were monitored. The locations of the 12 rural stations are essentially the same since 1970 except for stations 4L-32 (formerly number 6 on US 52) and 2L-54 (formerly number 11 on US 31), which changed in 1975.

The speed limit at all the stations is 55 mph, except the rural interstate locations, which were reposted for 65 mph beginning June 1, 1987. In addition, legislation was passed on April 1, 1988 to limit trucks with a gross weight of 13 tons, to 55 mph on Indiana rural interstates. The site locations are given in Table 1 and shown in Figure 1.

The vehicles were classified as Indiana or Non-Indiana passenger cars and light trucks (less than 5000 lbs. gross weight) or heavy trucks (equal to or more than 5000 lbs. gross weight). Computer analysis was performed for each vehicle classification, and for combined passenger cars and combined trucks.

1. Sample Size

At each station, a minimum of 200 vehicles in each direction were recorded using the free flow technique at that location. At least 25 of these vehicles, in each direction, were required to be heavy trucks.

2. Equipment and Field Procedure

The observations for this study were obtained by use of a Kustom Signals Model HR-8 K-Band radar gun. The burst method, using the on/off switch, was

Table 1: Monitoring Locations

Rural Interstate Highways		
RI-06	I-65	7.5 miles North of SR 160, mile marker 22
RI-12	I-74	4.0 miles West of SR 9, mile marker 108.8
RI-21	I-69	1.6 miles South of SR 18, mile marker 62
RI-34	I-65	2.0 miles South of SR 39, mile marker 135
4-Lane Highways		
4L-17	US 52	2.0 miles East of US 231
4L-20	US 41	1.0 mile North of SR 2
4L-21	US 31	0.8 mile North of SR 38
4L-32	US 30	3.7 miles West of US 421
2-Lane Highways		
2L-18	US 35	1.9 miles East of I-69
2L-54	US 231	1.1 miles South of SR 234
2L-79	SR 25	0.7 mile South of Americus
2L-91	SR 43	2.0 miles South of Chalmers
Urban Interstate Highways		
UI-01	I-94	West of Burr St. interchange, mile post 5.9
UI-06	I-65	Just South of White River, mile marker 116.8

used to record speeds. This method was used to avoid early detection by radar detectors. Speeds were taken from within a van parked on the right shoulder of the road or parked in an access driveway to the road. The observers were equipped with a CB radio to monitor possible radio notification of speed measurement and of police vehicles in the area. When radar speed recording was detected, and subsequently broadcast on the CB radio, speeds were not taken for at least 5 minutes. This problem occurred primarily on interstate highways.

The accuracy of the radar gun was checked at the beginning and end of each data recording session. The calibration was also confirmed every time the sampling technique was changed, and at other times when deemed necessary.

3. Results of Analysis

The free flow data collected were analyzed and are summarized for each station in Tables A1 through A14 in the Appendix. Tables A15 through A18 summarize the free flow data by highway classification. Table A19 is the summary for all 14 stations. Table A20 is the summary for all 12 rural highway classifications.

The results of the free flow data, categorized by highway classification and vehicle type, are shown in Table 2 through Table 5.

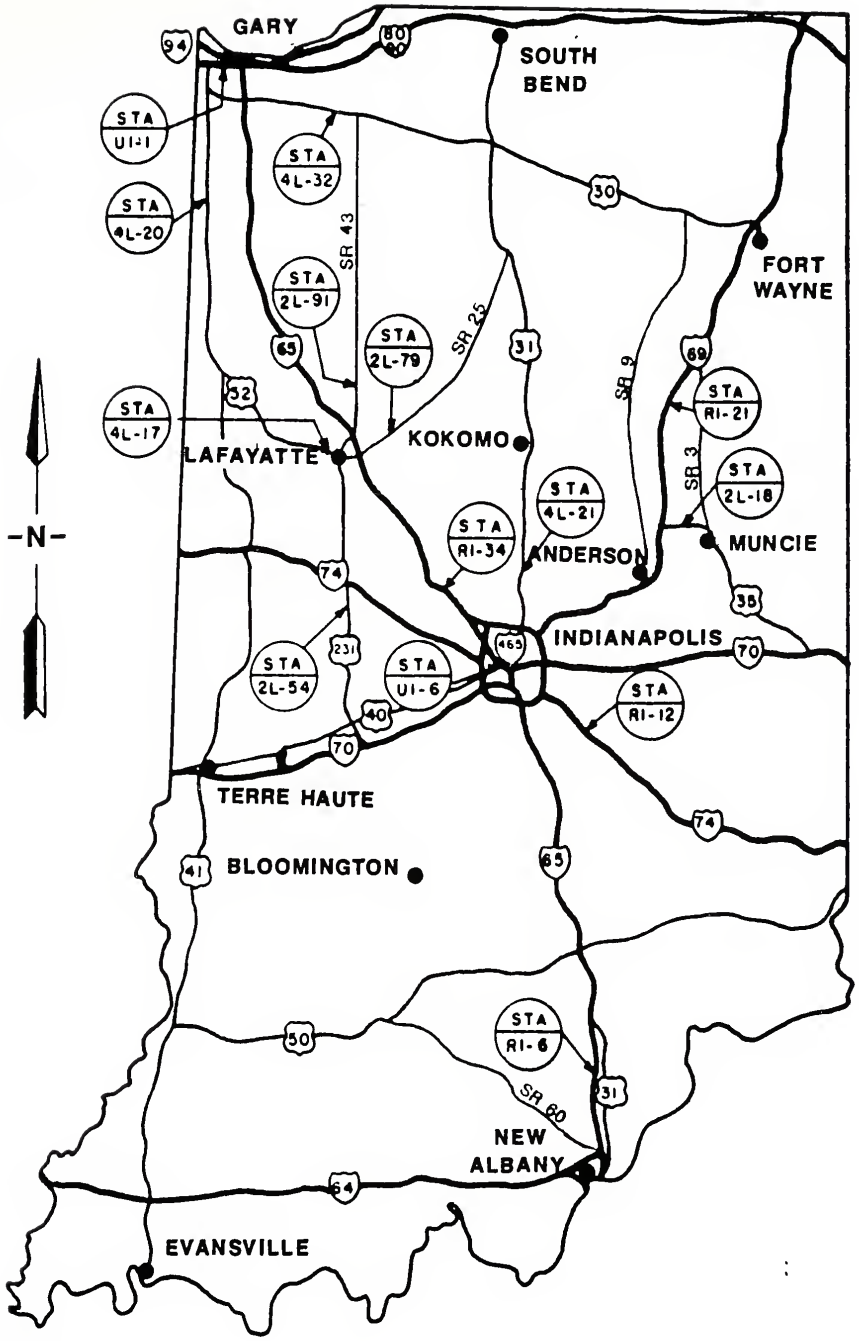

FIGURE 1. LOCATION OF SPEED-STUDY STATIONS

Table 2: Average Speed (MPH)

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	60.6	63.9	59.2	57.1	59.7	59.5
Non-Indiana	60.1	65.1	59.4	57.0	61.9	62.2
All Passenger Cars	60.4	64.4	59.2	57.1	60.2	60.2
85 Percentile (All)	64.2	68.2	63.6	61.0	65.5	65.7
15 Percentile (All)	55.5	59.4	54.1	52.2	54.2	54.0
Trucks:						
Less than 5000 lbs.	58.2	62.9	57.3	56.9	58.8	59.0
5000 lbs. or more	57.3	59.8	57.1	55.8	57.7	57.8
All Trucks	57.8	61.3	57.3	56.4	58.3	58.4
85 Percentile (All)	61.1	65.9	61.6	60.6	62.9	63.4
15 Percentile (All)	53.6	55.8	52.1	51.1	52.8	52.6
All Vehicles:						
Average	59.1	62.9	58.4	56.8	59.3	59.4
85 Percentile	62.9	67.3	62.8	60.8	64.6	64.9
15 Percentile	54.4	57.3	53.1	51.7	53.5	53.3

Table 3: Percent of Vehicles Exceeding 55 MPH

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	87.5	95.9	78.8	61.2	77.6	75.9
Non-Indiana	90.1	98.8	80.2	68.0	88.9	88.7
All Passenger Cars	88.1	97.1	79.1	61.8	80.4	79.1
Trucks:						
Less than 5000 lbs.	76.5	92.1	64.3	61.1	72.8	72.1
5000 lbs or more	70.2	84.6	63.9	48.7	68.0	67.4
All Trucks	73.3	88.3	64.1	55.8	70.6	70.0
All Vehicles:	80.8	92.9	72.7	59.1	75.9	75.0

Table 4: Percent of Vehicles Exceeding 60 MPH

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	47.9	78.8	37.6	20.3	41.8	40.7
Non-Indiana	44.3	87.6	37.2	13.4	58.9	61.4
All Passenger Cars	47.0	82.5	37.5	19.6	46.1	45.9
Trucks:						
Less than 5000 lbs.	27.1	72.6	24.0	20.4	36.6	38.3
5000 lbs. or more	18.1	39.1	20.4	13.4	24.3	25.7
All Trucks	22.5	55.6	22.5	17.4	30.9	32.6
All Vehicles:	34.9	69.6	31.1	18.6	39.1	39.9

Table 5: Percent of Vehicles Exceeding 65 MPH

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	12.3	37.5	9.6	5.0	14.3	14.6
Non-Indiana	8.4	48.8	9.5	3.1	26.8	29.9
All Passenger Cars	11.3	42.3	9.6	4.8	17.4	18.5
Trucks:						
Less than 5000 lbs.	3.2	30.1	4.4	5.5	11.5	13.0
5000 lbs. or more	1.5	8.6	3.4	3.1	4.6	5.4
All Trucks	2.3	19.2	4.0	4.4	8.3	9.6
All Vehicles:	6.9	31.2	7.2	4.7	13.2	14.4

The results of this study, and similar studies conducted since 1979, are tabulated in Table 6. The 15th and 85th percentile speed values for 1979 through 1988 were calculated by interpolation over 1 mph speed intervals from the raw data.

Table 6: Summary of Spot Speed Observations on Indiana Highways (Free-Moving Vehicles on Level, Tangent Sections)

	----Passenger Cars----				--------Trucks--------				-Combined-	
	Ind. Mean	Non-Ind. Mean	All Mean	All 85%	Lgt. Mean	Hvy. Mean	All Mean	All 85%	All Mean	All 85%
2-Lane:										
1979	56.4	56.0	56.4	60.5	55.1	55.6	55.6	61.1	55.4	61.4
1980	55.2	58.4	55.3	59.7	55.1	54.9	54.9	60.2	55.0	60.2
1981	55.7	56.2	55.8	60.2	55.0	54.7	54.8	59.9	54.8	59.9
1982	55.8	57.2	56.0	60.2	54.8	54.9	54.9	59.7	54.9	60.0
1983	56.3	55.8	56.2	60.7	55.0	54.6	54.8	59.3	55.7	60.2
1984	56.5	56.9	56.6	60.9	55.2	55.1	55.2	59.8	56.0	60.4
1985	55.8	55.5	55.7	60.5	55.4	53.9	54.8	55.4	55.4	60.1
1986	57.1	58.2	57.2	61.5	56.5	55.6	56.2	60.4	56.8	61.1
1987	57.3	57.4	57.3	61.6	56.3	55.4	55.9	60.5	56.7	61.2
1988	57.1	57.0	57.1	61.0	56.9	55.8	56.4	60.6	56.8	60.8
4-Lane:										
1979	56.3	57.0	56.5	61.1	55.7	56.4	56.5	62.3	56.1	61.6
1980	55.9	57.4	56.2	60.5	55.3	56.4	55.9	61.4	55.9	60.5
1981	56.5	58.0	56.8	61.1	56.3	56.1	56.2	61.5	56.2	61.0
1982	56.6	57.6	56.8	61.1	55.1	55.7	55.4	61.1	55.4	61.8
1983	57.4	58.0	57.5	61.7	56.4	56.4	56.4	61.7	57.1	61.4
1984	57.7	58.6	57.9	61.9	57.0	56.8	56.9	61.4	57.5	61.7
1985	56.9	58.3	57.2	61.3	56.3	55.4	55.8	60.6	56.7	61.0
1986	58.7	59.7	59.0	63.0	57.0	56.9	57.0	61.3	58.2	62.5
1987	58.6	60.8	59.1	63.6	57.7	57.2	57.5	62.1	58.4	63.0
1988	59.2	59.4	59.2	63.6	57.3	57.1	57.3	61.6	58.4	62.8
Rural Interstate:										
1979	58.4	58.9	58.6	62.4	57.6	59.3	59.5	64.5	58.7	64.0
1980	58.4	59.7	58.8	62.3	57.6	57.2	59.8	62.6	58.3	62.5
1981	57.9	59.6	58.6	62.3	57.4	58.8	58.4	62.9	58.4	62.4
1982	58.9	59.5	58.9	62.2	58.0	58.2	58.1	62.7	58.1	62.1
1983	59.2	60.0	59.5	63.1	58.5	58.7	58.6	62.8	59.2	62.8
1984	59.3	60.5	59.8	63.6	58.4	58.1	58.2	61.8	59.1	62.9
1985	59.2	60.1	59.5	63.6	58.0	57.6	57.7	61.7	58.9	62.9
1986	60.3	60.9	60.5	64.0	59.9	58.7	59.3	62.9	60.1	63.8
1987	62.5	63.4	62.9	66.9	61.9	61.0	61.4	65.3	62.3	66.4
1988	63.9	65.1	64.4	68.2	62.9	59.8	61.3	65.9	62.9	67.3
Urban Interstate:										
1981	57.7	58.5	57.9	62.2	57.2	56.5	56.8	61.7	57.5	61.5
1982	57.7	57.8	57.7	61.9	56.8	55.7	56.1	61.2	57.0	62.1
1983	58.7	58.2	58.6	61.9	57.8	57.2	57.4	61.4	58.2	61.6
1984	58.8	58.4	58.7	62.8	58.1	56.4	57.0	60.7	58.0	62.1
1985	59.5	59.3	59.4	63.7	58.4	57.3	57.7	60.9	58.7	62.8
1986	60.1	60.3	60.2	64.3	59.7	58.1	59.0	62.8	59.7	63.8
1987	60.3	61.2	60.5	64.3	60.2	58.0	59.2	62.5	60.0	63.7
1988	60.6	60.1	60.4	64.2	58.2	57.3	57.8	61.1	59.1	62.9

Figure 2 represents a graphic interpretation of the results from this, and similar studies, since 1979. The speed values plotted in Figure 2 were obtained in the same way as those in Table 6. Only data collected at the 12 rural stations were used to calculate the values in Figure 2.

Table 7 shows the average speeds for all passenger cars, trucks of more than 5000 lbs. and trucks less than 5000 lbs. with and without the two urban interstate stations.

Table 7: Average Speed (MPH)

	Passenger Cars		Trucks Less Than 5000 lbs.		Trucks 5000 lbs. or More	
Year	12 Rural Stations	All 14 Stations	12 Rural Stations	All 14 Stations	12 Rural Stations	All 14 Stations
1979	57.1	61.8	57.2	57.0	56.0	56.1
1980	56.7	56.8	56.8	56.6	56.0	56.1
1981	57.0	57.1	56.7	56.3	56.1	56.6
1982	57.2	57.3	55.8	55.9	56.4	56.3
1983	57.8	57.9	56.5	56.6	56.7	56.8
1984	58.1	58.3	56.7	56.9	56.9	56.8
1985	57.4	57.7	56.4	56.7	55.9	56.2
1986	59.0	59.2	57.7	58.0	57.2	57.3
1987	59.8	59.9	58.4	58.7	57.9	57.9
1988	60.2	60.2	59.0	58.8	57.8	57.7

4. Summary

Since the mean speeds are almost the same for the 12 rural stations (Table 7) as for the 14 urban and rural stations, there is no reason to expect that the results in Figure 2 would change significantly if the urban interstate stations were included in the analysis. However, for consistency in the analysis and historical reporting, data from the urban interstate locations are not included in Figure 2.

The 85th percentile, mean, and 15th percentile speed changes on all rural Indiana highways are also illustrated in Figure 2. The average speed of cars, light trucks and heavy trucks have remained nearly the same from 1979 to 1986. Mean and 85th percentile speeds dropped sharply from the summer of 1973 to to the summer of 1974 due to the implementation of the 55 mph speed limit.

The speeds varied slightly, up and down, from 1975 through 1978; however, some stabilization was realized from 1979 through 1982 (Figure 2). Speeds appeared to increase slightly from 1982 to 1984 above previous levels. A decrease in speeds was observed in 1985 for all categories, except for the 85th percentile speed for passenger cars on rural interstates, where no change occurred. However, all categories appeared to increase sharply in 1986 and 1987, except for a slight decrease in the 2-lane category for passenger cars

STATE OF INDIANA
RURAL SPEED TRENDS

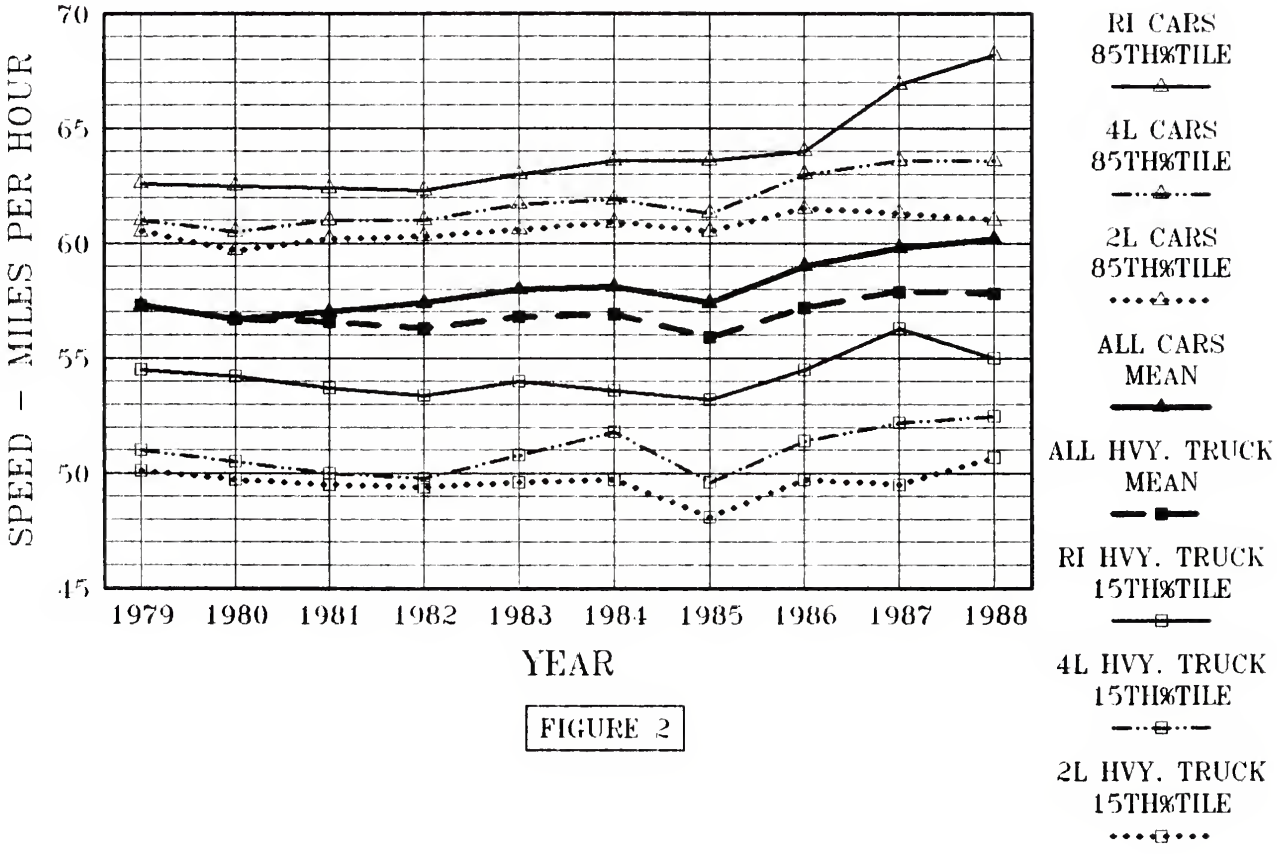

FIGURE 2

and heavy trucks.

The 85th percentile speed for passenger cars on 4-lane highways remained the same (Figure 2) in 1988 from 1987, while 2-lane 85th percentile speed decreased by 0.3 mph from 1987. An increase of 1.3 mph in 85th percentile speed was observed in 1988 from 1987 on rural interstates, in association with the increase in speed limit from 55 mph to 65 mph.

The mean speed of passenger cars, on all types of rural Indiana highways, increased slightly in 1988 from 1987 (Figure 2) by 0.4 mph. The mean speed of heavy trucks decreased by 0.1 mph. The mean speed of light trucks on all types of rural highways increased by 0.6 mph (Table 8).

The 15th percentile speed for heavy trucks decreased sharply by 1.3 mph in 1988 to near 1986 levels (Figure 2) in the rural interstate category. A slight increase of 0.3 mph was observed on 4-lane highways, while the 15th percentile speed increased by 1.2 mph on 2-lane highways.

A tabulation of change in mean speed during 1988 from 1987 is listed in Table 8. Figures 3, 4 and 5 graphically illustrate these changes. Figure 6 illustrates similar changes for the urban interstates. The rural interstate highways showed modest increases in mean speed (Table 8) for cars and light trucks 1988 from 1987. Passenger cars registered the largest increase at 1.5 mph, while light trucks increased by 1.0 mph. Heavy trucks, on the other hand, showed a decrease of 1.2 mph in mean speed (Figure 3).

Table 8: Summary of Changes in Mean Speed (MPH) in 1988 from 1987

Speed Category:	All Cars	L Trucks	H Trucks	All Veh.
Mean (Rural Interstate)	+ 1.5	+ 1.0	- 1.2	+ 0.6
Mean (4-Lane)	+ 0.1	- 0.4	- 0.1	0.0
Mean (2-Lane)	- 0.2	+ 0.6	+ 0.4	+ 0.1
Mean (All Rural)	+ 0.4	+ 0.6	- 0.1	+ 0.3
15th % (All Rural)	+ 0.5	+ 0.2	+ 0.3	+ 0.3
Median (All Rural)	+ 0.2	+ 0.4	- 0.5	0.0
85th % (All Rural)	+ 0.5	+ 0.6	- 0.7	+ 0.4
Mean (Urban Interstate)	- 0.1	- 2.0	- 0.7	- 0.8
Mean (All-14)	+ 0.3	+ 0.1	- 0.2	0.0
15th % (All-14)	+ 0.3	+ 0.1	+ 0.2	+ 0.2
Median (All-14)	+ 0.1	- 0.2	- 0.4	- 0.3
85th % (All-14)	+ 0.5	+ 0.1	- 0.8	+ 0.3

Only passenger cars showed a slight increase in mean speed of 0.1 mph on 4-lane highways in Indiana. Light trucks (less than 5000 lbs.) and heavy trucks (greater than 5000 lbs.), showed decreases in average speed (Table 8) on Indiana 4-lane highways. The largest decrease of 0.4 mph occurred in the light truck category, while heavy trucks decreased by 0.1 mph (Figure 4).

INDIANA SPEED TRENDS
RURAL INTERSTATE

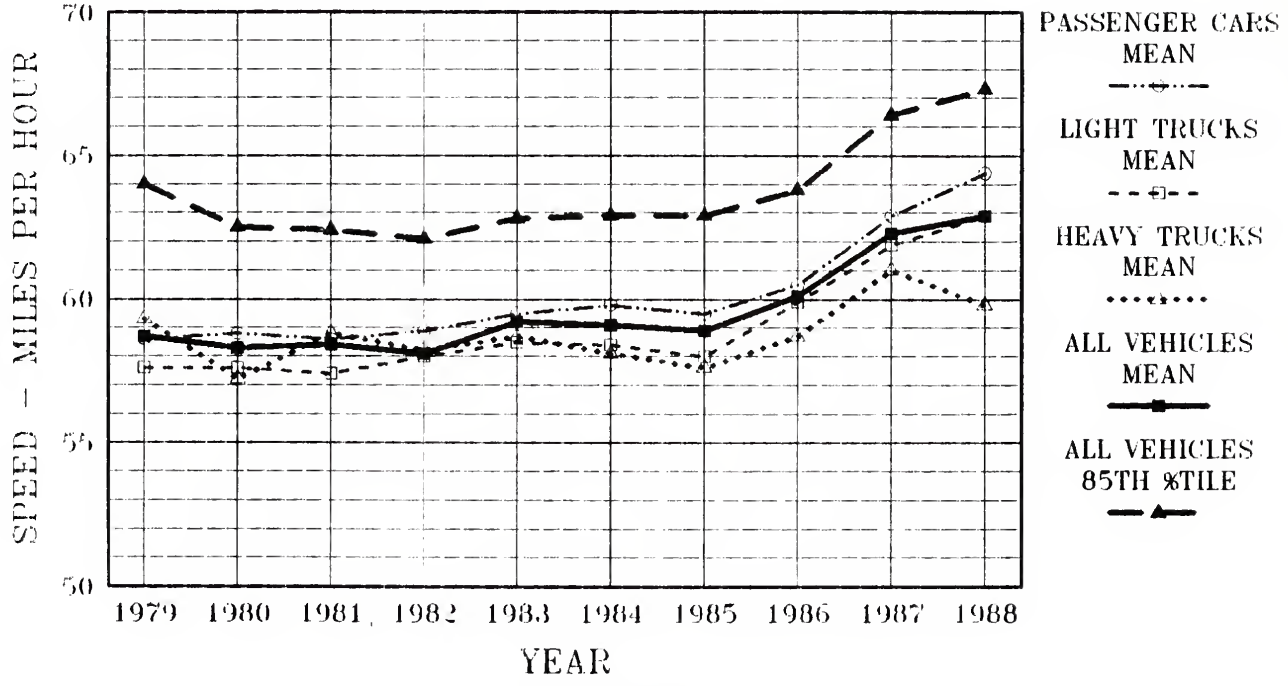

FIGURE 3

INDIANA SPEED TRENDS
4 – LANE

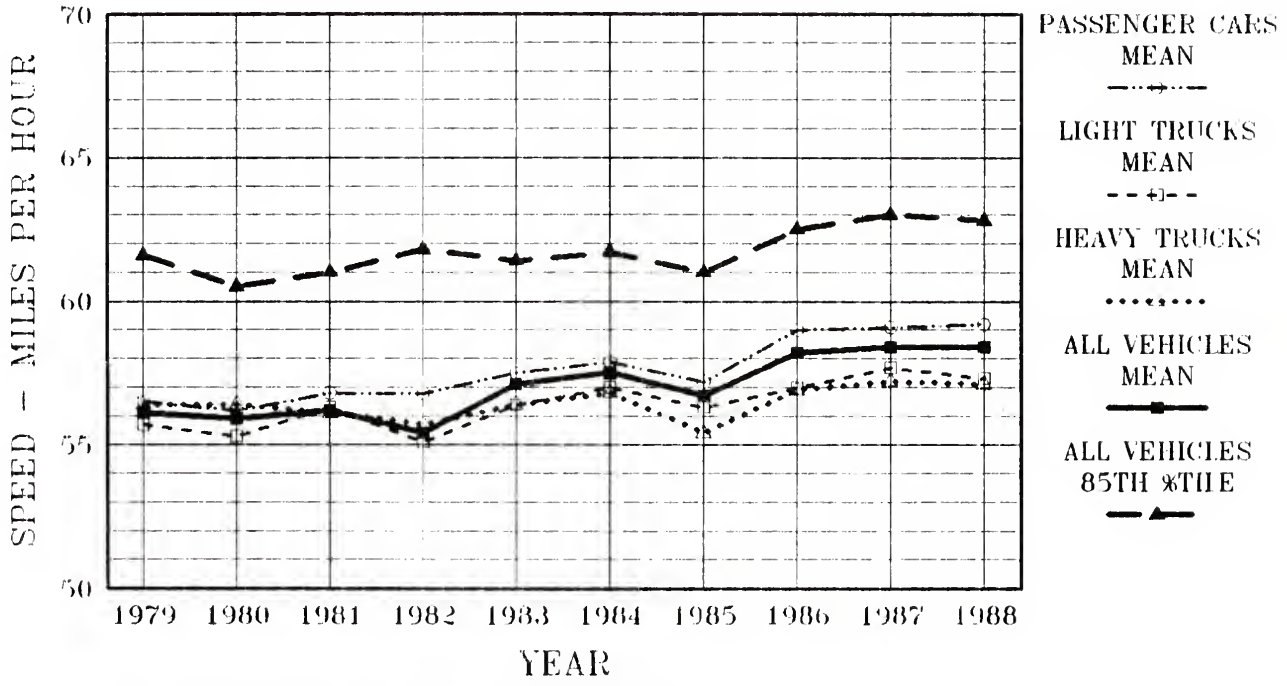

FIGURE 4

INDIANA SPEED TRENDS
2 – LANE

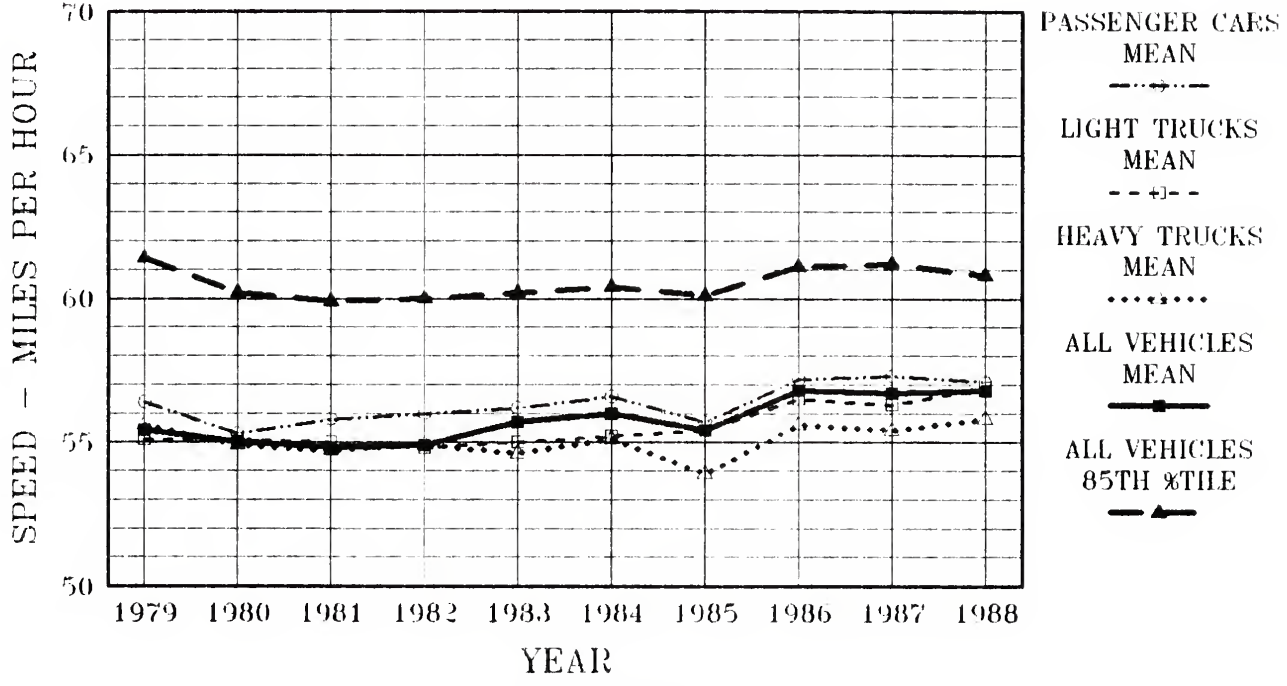

FIGURE 5

INDIANA SPEED TRENDS
URBAN INTERSTATE

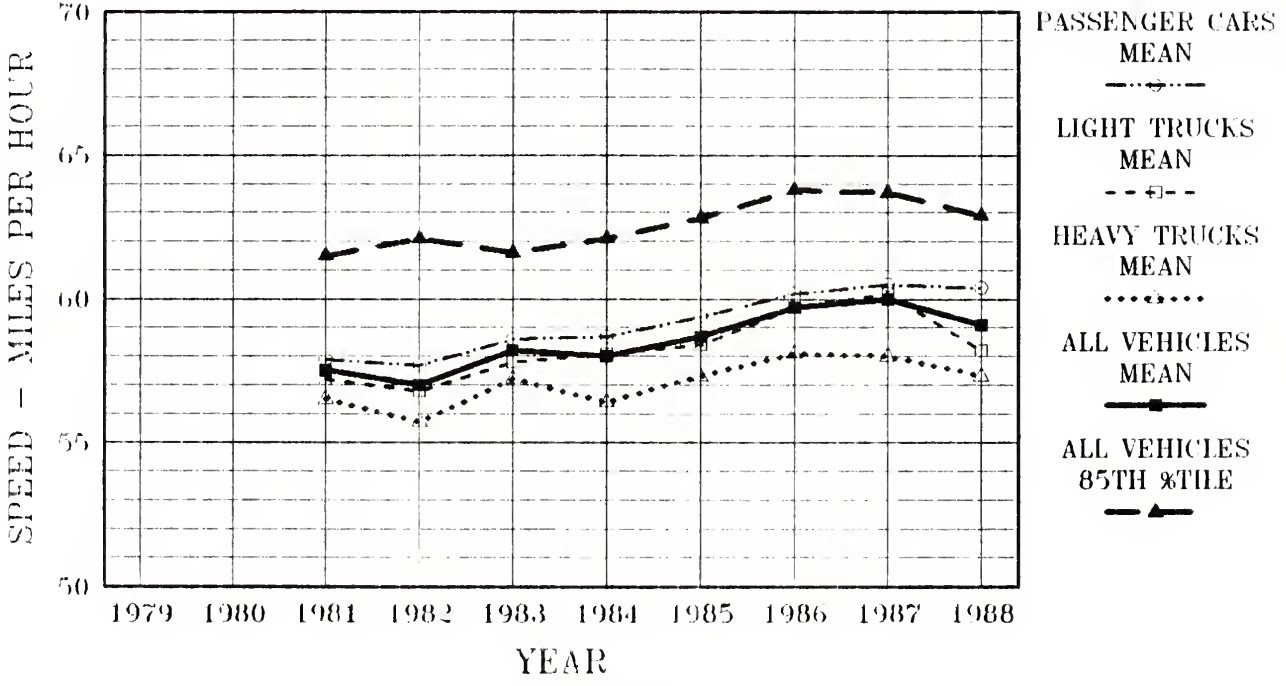

FIGURE 6

Only passenger cars showed a slight decrease in mean speed by 0.2 mph on rural Indiana 2-lane highways (Table 8). The mean speed of light trucks and heavy trucks increased by 0.6 mph and 0.4 mph respectively in 1988 (Figure 5).

The average speed of passenger cars on all types of rural Indiana highways increased (Table 8) by 0.4 mph in 1988 from 1987. The 85th percentile speed of passenger cars on all types of rural Indiana highways also increased slightly by 0.5 mph from 1987.

The average speed of light trucks (less than 5000 lbs.) on all types of rural Indiana highways increased (Table 8) by 0.6 mph in 1988 from 1987. The 85th percentile speed of light trucks on all types of rural Indiana highways increased by 0.6 mph from 1987.

Table 9: Summary of Changes in Percent Greater Than Speed in 1988 from 1987

		% > 55	% > 60	% > 65
Rural Interstate	All Cars	+ 4.0	+11.5	+11.7
	Light Trucks	+ 2.3	+ 8.8	+ 9.2
	Heavy Trucks	- 6.1	-17.1	- 3.4
	All Vehicles	+ 1.0	+ 3.0	+ 6.2
Rural 4-Lane	All Cars	+ 3.0	- 0.5	- 1.4
	Light Trucks	- 0.4	- 2.2	- 3.5
	Heavy Trucks	+ 0.7	+ 5.4	+ 0.1
	All Vehicles	+ 1.6	- 1.8	- 1.7
Rural 2-Lane	All Cars	- 0.8	- 4.2	- 0.3
	Light Trucks	+ 4.5	- 0.4	+ 1.9
	Heavy Trucks	- 3.3	+ 0.1	+ 0.8
	All Vehicles	0.0	- 2.5	+ 0.4
Urban Interstate	All Cars	- 1.1	+ 0.6	- 0.4
	Light Trucks	-11.8	-21.9	- 6.0
	Heavy Trucks	- 6.0	- 7.0	+ 0.2
	All Vehicles	- 5.9	- 8.1	- 2.4
All Rural	All Cars	+ 1.7	+ 1.4	+ 2.7
	Light Trucks	+ 2.9	+ 2.8	+ 2.7
	Heavy Trucks	- 1.3	- 6.0	- 0.6
	All Vehicles	+ 1.0	- 0.2	+ 1.7
All Stations	All Cars	+ 0.9	+ 1.2	+ 2.4
	Light Trucks	+ 0.6	+ 1.0	+ 1.4
	Heavy Trucks	- 2.1	- 6.3	+ 0.7
	All Vehicles	- 0.2	- 1.5	+ 1.1

The average speed of heavy trucks (5000 lbs. or more) on all types of rural Indiana highways decreased (Table 8) by 0.1 mph in 1988 from 1987. The 85th percentile speed of heavy trucks on all types of rural Indiana highways decreased by 0.7 mph from 1987.

The mean speed for all vehicles on all types of rural Indiana highways increased slightly (Table 8) in 1988 from 1987 by 0.3 mph. If the urban interstate locations are included in the analysis, the mean speed for all types of vehicles on all types of Indiana highways remained the same, with no change, in 1988 from 1987.

The 85th percentile speed for all vehicles on all types of rural Indiana highways increased (Table 8) in 1988 from 1987 by 0.4 mph. If the urban interstate locations are included in the analysis, the 85th percentile speed for all types of vehicles on all types of Indiana highways increased by 0.3 mph in 1988 from 1987.

A summary of changes in percent of vehicles exceeding 55, 60 and 65 mph in 1988 from 1987 is tabulated in Table 9. The largest increase in percent greater than speed in 1988 was observed by passenger cars on Indiana rural interstate highways at 11.7% > 65 mph (figure 9) and 11.5% > 60 mph. Light trucks increased by 9.2% > 65 mph and 8.8 % > 60 mph. Heavy trucks registered a decrease of 17.1% > 60 mph, followed by decreases of 6.1% > 55 mph and 3.4% > 65 mph.

For rural 4-lane highways, the largest increase in percent greater than speed in 1988 was noticed at 5.4% > 60 mph by heavy trucks (figure 9). Passenger cars increased by 3.0% > 55 mph, while light trucks decreased by 3.5% > 65 mph, and 2.2% > 60 mph.

For rural 2-lane highways, light trucks registered the largest increase in percent greater than speed at 4.5% > 55 mph (figure 9). Heavy trucks decreased by 3.3% > 55 mph, while passenger cars decreased by 4.2% > 60 mph in 1988.

Table 9 indicates that there is an increase of 1.0 percent of all vehicles exceeding 55 mph on all rural highways and a decrease of 0.2 percent of all vehicles exceeding 60 mph on all highways in 1988 from 1987.

5. Conclusions

Mean speed for passenger cars and light trucks has continued to increase in the rural interstate category (Figure 3). On the other hand, mean speed of large trucks has returned to near 1986 levels due to the revised speed limit of 55 mph. The average speed for all vehicles on Indiana rural interstates is 62.9 mph in 1988, while the 85th percentile speed is 67.3 mph.

Mean speed for all vehicles on Indiana 4-lane highways appears to have temporarily stabilized (Figure 4) in 1988 at 58.4 mph, while the 85th percentile speed has dropped slightly to 62.8 mph.

Mean speed for all vehicles on Indiana 2-lane highways also appears to be relatively stable (Figure 5) in 1988, from previous years, at 56.8 mph. The 85th percentile speed dropped slightly to 60.8 mph.

Mean speed for all vehicles on Indiana urban interstates has dropped slightly from 1987 levels (Figure 6) to 59.1 mph. The 85th percentile speed also dropped to 62.9 mph in 1988.

Mean speed for all types of vehicles, on all types of Indiana highways, remained the same as 1987 in 1988 at 59.3 mph. If the urban interstates are excluded from the survey, the average speed on all types of rural Indiana highways increased by 0.3 mph at 59.4 mph from 1987 levels.

Appendix

Speed Data (Tables A1 to A20)

TABLE A1 :SPEED DATA

STATION: UI-01 HIGHWAY: I-94 LOCATION: WEST OF BURR ST. INTERCHANGE, MILE MARKER 5.9

NO. OF LANES: 6 TYPE OF SURFACE: ASPHALT WEATHER: SUNNY, BRIGHT

THIS OBSERVATION
DATE: 6/7/88
TIME: 12:17 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 6/11/87
TIME: 4:48 PM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	318	200	226	99	92	101	222	292	87	117	135	175
AVE. SPEED (MPH)	59.66	59.00	59.12	58.22	60.97	59.76	58.61	57.59	59.87	57.11	57.79	57.90
STANDARD DEVIATION	4.143	3.782	3.963	3.472	4.303	3.932	4.053	3.422	4.769	3.363	3.285	3.434
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.5	0.3	1.1	0.9	0.	0.
OF 49 MPH	0.6	0.5	0.9	1.0	0.	0.	1.8	2.1	1.1	1.7	2.2	2.3
VEHICLES 54 MPH	9.7	9.5	11.9	13.1	4.3	5.9	15.8	14.7	12.6	17.1	17.8	13.1
TRAVELING 59 MPH	51.9	55.0	57.5	63.6	38.0	46.5	60.4	69.9	43.7	76.1	71.1	65.7
LESS THAN 64 MPH	89.0	93.0	91.2	96.0	83.7	90.1	93.7	98.3	86.2	100.0	98.5	97.1
OR 69 MPH	97.8	99.5	99.1	100.0	94.6	99.0	99.1	100.0	97.7	100.0	100.0	100.0
EQUAL TO 74 MPH	100.0	99.5	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: EB												
# OF VEHICLES	151	98	117	48	34	50	104	150	46	64	58	86
AVERAGE SPEED	59.66	58.93	59.12	58.33	61.50	59.50	58.63	57.67	60.06	56.83	57.48	58.30
DIRECTION: WB												
# OF VEHICLES	167	102	109	51	58	51	118	142	41	53	77	89
AVERAGE SPEED	59.66	59.07	59.13	58.12	60.65	60.02	58.59	57.49	59.66	57.45	58.03	57.52

TABLE A2 :SPEED DATA

STATION: UI-06 HIGHWAY: I-65 LOCATION: SOUTH OF WHITE RIVER, MILE MARKER 116.8

NO. OF LANES: 6 TYPE OF SURFACE: CONCRETE WEATHER: SUNNY, BRIGHT

THIS OBSERVATION
DATE: 5/18/88
TIME: 2:10 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 5/7/87
TIME: 2:57 PM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	426	330	363	300	63	30	240	224	152	134	88	90
AVE. SPEED (MPH)	61.17	61.30	61.10	61.32	61.59	61.13	59.66	57.97	60.45	59.16	58.29	56.21
STANDARD DEVIATION	4.601	4.888	4.755	4.880	3.590	5.043	4.183	4.424	3.801	4.185	4.473	4.196
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.4	0.4	0.	0.	1.1	1.1
OF 49 MPH	0.5	0.	0.6	0.	0.	0.	0.8	2.7	0.	0.	2.3	6.7
VEHICLES 54 MPH	5.4	5.2	6.3	5.3	0.	3.3	10.4	21.0	6.6	12.7	17.0	33.3
TRAVELING 59 MPH	36.6	36.7	38.0	36.7	28.6	36.7	45.8	65.6	38.8	54.5	58.0	82.2
LESS THAN 64 MPH	80.0	79.1	79.6	79.3	82.5	76.7	89.2	94.2	85.5	91.8	95.5	97.8
OR 69 MPH	95.1	95.8	94.8	96.0	96.8	93.3	98.3	98.7	98.7	97.8	97.7	100.0
EQUAL TO 74 MPH	98.8	98.2	98.6	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	99.8	99.7	99.7	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	99.7	100.0	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	211	162	176	145	35	17	108	119	64	61	44	58
AVERAGE SPEED	61.23	61.34	61.15	61.34	61.63	61.29	59.55	57.71	60.50	58.48	58.16	56.90
DIRECTION: SB												
# OF VEHICLES	215	168	187	155	28	13	132	105	88	73	44	32
AVERAGE SPEED	61.11	61.27	61.05	61.30	61.54	60.92	59.76	58.28	60.42	59.73	58.43	54.97

TABLE A3 :SPEED DATA

STATION: RI-06 HIGHWAY: I-65 LOCATION: 7.5 MILES NORTH OF SR 160, MILE MARKER 22.0

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: SUNNY, BRIGHT

THIS OBSERVATION
DATE: 5/25/88
TIME: 12:48 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 5/11/87
TIME: 1:49 PM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	304	273	131	125	173	148	194	214	98	117	96	97
AVE. SPEED (MPH)	61.40	64.70	60.66	64.10	61.95	65.21	59.65	60.91	60.13	62.24	59.17	59.30
STANDARD DEVIATION	4.527	4.847	4.229	5.119	4.676	4.560	4.053	4.995	4.185	5.046	3.873	4.452
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.5	0.	0.	0.	1.0	0.
OF 49 MPH	0.3	0.	0.8	0.	0.	0.	0.5	0.5	0.	0.	1.0	1.0
VEHICLES 54 MPH	6.3	2.9	8.4	4.8	4.6	1.4	9.8	8.9	10.2	6.8	9.4	11.3
TRAVELING 59 MPH	33.6	15.0	36.6	18.4	31.2	12.2	44.3	41.6	37.8	30.8	51.0	54.6
LESS THAN 64 MPH	75.0	44.7	80.9	48.0	70.5	41.9	90.2	74.8	87.8	67.5	92.7	83.5
OR 69 MPH	96.1	85.3	98.5	87.2	94.2	83.8	99.5	95.8	99.0	94.0	100.0	97.9
EQUAL TO 74 MPH	99.7	98.5	100.0	98.4	99.4	98.6	100.0	99.5	100.0	99.1	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	153	131	68	70	85	61	85	111	48	58	37	53
AVERAGE SPEED	61.72	64.94	61.09	64.36	62.24	65.61	59.51	60.74	59.42	62.43	59.62	58.89
DIRECTION: SB												
# OF VEHICLES	151	142	63	55	88	87	109	103	50	59	59	44
AVERAGE SPEED	61.06	64.48	60.21	63.76	61.67	64.93	59.77	61.09	60.82	62.05	58.88	59.80

TABLE A4 :SPEED DATA

STATION: RI-12 HIGHWAY: I-74 LOCATION: EAST OF 1-465, MILE MARKER 108.8

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: SUNNY, CLEAR

THIS OBSERVATION
DATE: 8/4/88
TIME: 1:15 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 6/10/87
TIME: 3:44 PM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	316	250	213	154	103	96	170	212	98	104	72	108
AVE. SPEED (MPH)	63.72	64.24	63.41	63.83	64.36	64.91	61.83	61.81	62.55	63.90	60.85	59.79
STANDARD DEVIATION	4.432	4.063	4.600	4.329	4.009	3.516	4.255	5.009	4.686	4.878	3.376	4.263
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.	0.5	0.	0.	0.	0.9
OF 49 MPH	0.6	0.	0.5	0.	1.0	0.	0.	0.5	0.	0.	0.	0.9
VEHICLES 54 MPH	3.5	1.2	4.7	1.9	1.0	0.	4.7	3.8	6.1	4.8	2.8	2.8
TRAVELING 59 MPH	16.8	13.6	19.2	17.5	11.7	7.3	26.5	34.4	22.4	14.4	31.9	53.7
LESS THAN 64 MPH	53.5	48.8	57.7	54.5	44.7	39.6	74.1	71.2	63.3	50.0	88.9	91.7
OR 69 MPH	91.5	91.2	91.5	90.9	91.3	91.7	97.1	95.3	94.9	93.3	100.0	97.2
EQUAL TO 74 MPH	100.0	99.6	100.0	99.4	100.0	100.0	98.8	98.6	98.0	98.1	100.0	99.1
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	100.0	99.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: EB												
# OF VEHICLES	154	132	94	70	60	62	89	93	57	45	32	48
AVERAGE SPEED	63.68	64.31	63.29	64.06	64.30	64.60	61.80	61.98	62.10	63.53	61.25	60.52
DIRECTION: WB												
# OF VEHICLES	162	118	119	84	43	34	81	119	41	59	40	60
AVERAGE SPEED	63.75	64.17	63.50	63.64	64.44	65.47	61.86	61.67	63.17	64.19	60.53	59.20

TABLE A5 :SPEED DATA

STATION: RI-21 HIGHWAY: I-69 LOCATION: 1.6 MILES SOUTH OF SR 18, MILE MARKER 62.0

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: CLEAR, BRIGHT

THIS OBSERVATION
DATE: 6/10/88
TIME: 11:14 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 7/9/87
TIME: 11:24 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	284	221	125	118	159	103	192	240	88	105	104	135
AVE. SPEED (MPH)	63.87	65.10	63.23	64.97	64.37	65.26	61.63	61.28	61.53	63.61	61.70	59.47
STANDARD DEVIATION	4.444	4.359	4.119	4.668	4.636	3.993	4.355	5.249	4.840	5.274	3.921	4.470
PERCENT OF VEHICLES TRAVELING LESS THAN OR EQUAL TO 24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
49 MPH	0.4	0.	0.	0.	0.6	0.	0.5	0.8	1.1	1.9	0.	0.
54 MPH	2.8	1.8	1.6	2.5	3.8	1.0	7.8	9.2	11.4	7.6	4.8	10.4
59 MPH	13.0	9.0	16.0	11.0	10.7	6.8	28.6	37.9	31.8	18.1	26.0	53.3
64 MPH	54.6	40.7	59.2	41.5	50.9	39.8	72.9	72.5	68.2	53.3	76.9	87.4
69 MPH	91.5	86.4	95.2	84.7	88.7	88.3	97.9	94.2	97.7	91.4	98.1	96.3
74 MPH	99.3	98.2	100.0	98.3	98.7	98.1	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	137	119	62	70	75	49	94	121	48	50	46	71
AVERAGE SPEED	64.88	65.43	64.16	65.06	65.47	65.96	62.97	62.10	62.31	63.32	63.65	61.24
DIRECTION: SB												
# OF VEHICLES	147	102	63	48	84	54	98	119	40	55	58	64
AVERAGE SPEED	62.93	64.73	62.32	64.83	63.39	64.63	60.34	60.45	60.60	63.87	60.15	57.50

TABLE A6 :SPEED DATA

STATION: RI-34 HIGHWAY: I-65 LOCATION: 2.0 MILES SOUTH OF SR 39, MILE MARKER 135.0

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: CLEAR, BRIGHT

THIS OBSERVATION
DATE: 8/3/88
TIME: 2:58 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 8/19/87
TIME: 11:25 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	291	228	171	163	120	65	224	231	108	116	116	115
AVE. SPEED (MPH)	62.72	63.72	62.23	63.19	63.40	65.05	62.48	61.30	63.06	62.04	61.95	60.56
STANDARD DEVIATION	5.071	4.203	5.165	4.085	4.874	4.233	4.804	4.129	5.034	4.537	4.536	3.537
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OF 49 MPH	0.3	0.	0.6	0.	0.	0.	0.	0.4	0.	0.9	0.	0.
VEHICLES 54 MPH	6.2	1.8	7.0	2.5	5.0	0.	4.5	4.8	4.6	6.0	4.3	3.5
TRAVELING 59 MPH	25.1	14.0	28.7	16.6	20.0	7.7	27.2	32.9	23.1	25.9	31.0	40.0
LESS THAN 64 MPH	60.5	58.8	62.6	62.6	57.5	49.2	66.1	77.9	60.2	68.1	71.6	87.8
OR 69 MPH	91.8	93.0	92.4	95.1	90.8	87.7	93.3	97.4	89.8	94.8	96.6	100.0
EQUAL TO 74 MPH	99.3	98.7	99.4	99.4	99.2	96.9	98.7	100.0	99.1	100.0	98.3	100.0
79 MPH	99.7	100.0	99.4	100.0	100.0	100.0	99.6	100.0	99.1	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	140	108	84	79	56	29	111	120	46	65	65	55
AVERAGE SPEED	60.89	64.17	60.37	63.53	61.68	65.90	61.12	61.77	62.30	62.46	60.28	60.95
DIRECTION: SB												
# OF VEHICLES	151	120	87	84	64	36	113	111	62	51	51	60
AVERAGE SPEED	64.40	63.32	64.03	62.87	64.91	64.36	63.82	60.80	63.61	61.51	64.08	60.20

TABLE A7 :SPEED DATA

STATION: 4L-17 HIGHWAY: US 52 LOCATION: 2.0 MILES EAST OF US 231

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: BRIGHT, CLEAR

THIS OBSERVATION
DATE: 5/10/88
TIME: 10:15 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 6/18/87
TIME: 10:00 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	327	281	290	247	37	34	197	191	145	127	52	64
AVE. SPEED (MPH)	58.74	58.57	58.31	58.40	62.08	59.82	56.95	57.40	57.10	57.08	56.54	58.03
STANDARD DEVIATION	5.353	5.547	5.094	5.542	6.180	5.507	5.251	4.958	5.213	4.622	5.385	5.549
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.5	0.	0.	0.	1.6
PERCENT 44 MPH	0.9	1.4	1.0	1.6	0.	0.	1.5	0.5	1.4	0.	1.9	1.6
OF 49 MPH	3.4	4.6	3.8	5.3	0.	0.	7.1	4.2	6.9	4.7	7.7	3.1
VEHICLES 54 MPH	19.3	17.1	21.0	18.6	5.4	5.9	29.9	26.7	26.9	27.6	38.5	25.0
TRAVELING 59 MPH	58.4	55.9	60.0	55.9	45.9	55.9	70.6	66.5	71.0	67.7	69.2	64.1
LESS THAN 64 MPH	88.1	88.3	90.3	88.7	70.3	85.3	91.9	93.2	92.4	96.9	90.4	85.9
OR 69 MPH	97.6	97.2	99.3	98.0	83.8	91.2	99.0	99.0	98.6	99.2	100.0	98.4
EQUAL TO 74 MPH	99.1	99.3	99.7	99.2	94.6	100.0	99.5	100.0	99.3	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: EB												
# OF VEHICLES	194	129	170	113	24	16	95	93	69	56	26	37
AVERAGE SPEED	59.32	59.07	58.63	59.00	64.21	59.56	58.10	58.44	58.23	58.48	57.73	58.38
DIRECTION: WB												
# OF VEHICLES	133	152	120	134	13	18	102	98	76	71	26	27
AVERAGE SPEED	57.89	58.15	57.86	57.90	58.15	60.06	55.89	56.41	56.08	55.97	55.35	57.56

TABLE A8 :SPEED DATA

STATION: 4L-20 HIGHWAY: US 41 LOCATION: 1.0 MILE NORTH OF SR 2

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: CLOUDY, BRIGHT

THIS OBSERVATION
DATE: 8/5/88
TIME: 12:26 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 5/8/87
TIME: 10:25 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	279	255	205	171	74	84	210	189	111	104	99	85
AVE. SPEED (MPH)	59.07	59.20	58.14	59.45	61.65	58.70	57.74	57.10	58.39	57.24	57.01	56.93
STANDARD DEVIATION	5.641	5.700	5.118	5.472	6.232	6.142	5.723	5.378	5.932	5.946	5.416	4.618
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.5	0.	0.	0.	1.2
PERCENT 44 MPH	0.7	0.8	0.5	0.6	1.4	1.2	1.0	0.5	0.9	0.	1.0	1.2
OF 49 MPH	4.3	3.5	5.4	2.9	1.4	4.8	8.1	4.2	6.3	4.8	10.1	3.5
VEHICLES 54 MPH	18.6	18.4	23.4	17.5	5.4	20.2	25.2	33.3	22.5	38.5	28.3	27.1
TRAVELING 59 MPH	52.0	53.7	55.6	51.5	41.9	58.3	62.4	70.4	60.4	71.2	64.6	69.4
LESS THAN 64 MPH	84.6	82.7	90.2	83.6	68.9	81.0	89.5	92.1	88.3	88.5	90.9	96.5
OR 69 MPH	96.4	95.7	99.5	95.9	87.8	95.2	97.1	96.8	94.6	95.2	100.0	98.8
EQUAL TO 74 MPH	99.3	98.8	100.0	98.8	97.3	98.8	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	143	132	108	81	35	51	109	88	56	52	53	36
AVERAGE SPEED	57.29	58.11	56.63	58.52	59.34	57.45	55.37	55.61	56.32	55.81	54.36	55.33
DIRECTION: SB												
# OF VEHICLES	136	123	97	90	39	33	101	101	55	52	46	49
AVERAGE SPEED	60.94	60.38	59.83	60.29	63.72	60.64	60.30	58.40	60.49	58.67	60.06	58.10

TABLE A9 :SPEED DATA

STATION: 4L-21 HIGHWAY: US 31 LOCATION: 0.8 MILE NORTH OF SR 38

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: CLEAR, BRIGHT

THIS OBSERVATION	LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 8/3/88	DATE: 8/20/88
TIME: 11:32 AM	TIME: 1:01 PM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	281	270	230	213	51	57	204	205	128	120	76	85
AVE. SPEED (MPH)	58.92	60.14	59.00	60.19	58.55	59.95	57.24	57.96	57.79	58.65	56.33	56.98
STANDARD DEVIATION	5.083	4.249	5.315	4.363	3.890	3.819	5.139	4.716	5.558	4.630	4.222	4.688
PERCENT OF VEHICLES TRAVELING LESS THAN OR EQUAL TO 24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44 MPH	0.	0.	0.	0.	0.	0.	1.5	0.	0.8	0.	2.6	0.
49 MPH	1.8	0.4	2.2	0.5	0.	0.	3.4	3.9	3.9	1.7	2.6	7.1
54 MPH	17.4	8.9	18.7	8.0	11.8	12.3	29.4	25.4	27.3	21.7	32.9	30.6
59 MPH	58.7	44.8	58.7	44.1	58.8	47.4	72.1	60.5	69.5	56.7	76.3	65.9
64 MPH	87.5	84.8	86.1	84.5	94.1	86.0	91.2	92.2	86.7	90.0	98.7	95.3
69 MPH	98.2	97.4	97.8	96.7	100.0	100.0	98.5	99.5	97.7	99.2	100.0	100.0
74 MPH	98.9	100.0	98.7	100.0	100.0	100.0	99.5	100.0	99.2	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	131	136	108	108	23	28	106	110	61	65	45	45
AVERAGE SPEED	59.75	60.68	59.90	60.91	59.04	59.82	57.13	58.28	58.31	59.28	55.53	56.84
DIRECTION: SB												
# OF VEHICLES	150	134	122	105	28	29	98	95	67	55	31	40
AVERAGE SPEED	58.19	59.58	58.21	59.45	58.14	60.07	57.37	57.58	57.31	57.91	57.48	57.13

TABLE A10:SPEED DATA

STATION: 4L-32 HIGHWAY: US 30 LOCATION: 3.65 MILES WEST OF US 421

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: SUNNY, BRIGHT

THIS OBSERVATION
DATE: 6/9/88
TIME: 9:56 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 7/28/87
TIME: 2:26 PM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	263	248	164	170	99	78	207	198	97	108	110	90
AVE. SPEED (MPH)	59.67	59.04	59.03	58.78	60.72	59.62	57.98	56.55	57.59	56.29	58.32	56.86
STANDARD DEVIATION	4.976	4.246	4.654	4.425	5.326	3.791	4.356	3.729	4.972	3.913	3.719	3.492
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.4	0.	0.	0.	1.0	0.	0.	0.	0.	0.	0.	0.
OF 49 MPH	1.5	0.8	1.8	1.2	1.0	0.	2.9	3.0	4.1	3.7	1.8	2.2
VEHICLES 54 MPH	13.7	12.9	15.2	15.9	11.1	6.4	19.3	29.8	24.7	33.3	14.5	25.6
TRAVELING 59 MPH	50.6	55.6	56.1	55.9	41.4	55.1	65.7	80.8	71.1	79.6	60.9	82.2
LESS THAN 64 MPH	86.3	92.3	90.9	94.1	78.8	88.5	94.2	98.0	91.8	99.1	96.4	96.7
OR 69 MPH	95.8	99.2	97.6	99.4	92.9	98.7	99.0	100.0	97.9	100.0	100.0	100.0
EQUAL TO 74 MPH	99.6	99.6	100.0	99.4	99.0	100.0	99.5	100.0	99.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: EB												
# OF VEHICLES	128	113	77	83	51	30	105	113	49	57	56	56
AVERAGE SPEED	59.37	58.87	59.05	58.80	59.84	59.07	58.22	57.04	58.37	56.63	58.09	57.45
DIRECTION: WB												
# OF VEHICLES	135	135	87	87	48	48	102	85	48	51	54	34
AVERAGE SPEED	59.95	59.19	59.01	58.77	61.65	59.96	57.72	55.89	56.79	55.90	58.56	55.88

TABLE A11:SPEED DATA

STATION: 2L-18 HIGHWAY: US 35 LOCATION: 1.9 MILES EAST OF I-69

NO. OF LANES: 2 TYPE OF SURFACE: ASPHALT WEATHER: SUNNY, BRIGHT

THIS OBSERVATION
DATE: 6/17/88
TIME: 11:56 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 5/6/87
TIME: 11:55 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	288	259	262	230	26	29	248	179	123	102	125	77
AVE. SPEED (MPH)	57.54	57.20	57.45	57.23	58.46	56.90	54.88	55.50	55.37	56.14	54.40	54.65
STANDARD DEVIATION	5.409	4.902	5.385	5.043	5.666	3.648	5.594	4.913	5.440	5.203	5.723	4.391
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.4	0.	0.	0.	0.8	0.
PERCENT 44 MPH	0.7	0.	0.8	0.	0.	0.	4.8	0.	4.1	0.	5.6	0.
OF 49 MPH	4.5	5.0	4.6	5.2	3.8	3.4	16.5	8.9	12.2	9.8	20.8	7.8
VEHICLES 54 MPH	31.9	28.6	32.4	29.6	26.9	20.7	44.0	43.6	43.1	40.2	44.8	48.1
TRAVELING 59 MPH	64.2	73.7	64.9	72.6	57.7	82.8	79.8	81.0	75.6	73.5	84.0	90.9
LESS THAN 64 MPH	91.3	93.1	91.6	92.6	88.5	96.6	97.2	95.0	95.9	94.1	98.4	96.1
OR 69 MPH	97.2	98.1	97.3	97.8	96.2	100.0	100.0	98.9	100.0	99.0	100.0	98.7
EQUAL TO 74 MPH	99.7	99.2	99.6	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: EB												
# OF VEHICLES	137	137	130	125	7	12	122	88	59	53	63	35
AVERAGE SPEED	57.58	56.96	57.65	56.97	56.29	56.83	56.06	55.95	56.31	56.21	55.83	55.57
DIRECTION: WB												
# OF VEHICLES	151	122	132	105	19	17	126	91	64	49	62	42
AVERAGE SPEED	57.51	57.47	57.26	57.55	59.26	56.94	53.74	55.05	54.50	56.06	52.95	53.88

TABLE A12:SPEED DATA

STATION: 2L-54 HIGHWAY: US 231 LOCATION: 1.1 MILES SOUTH OF SR 234

NO. OF LANES: 2 TYPE OF SURFACE: ASPHALT WEATHER: SUNNY, BRIGHT

THIS OBSERVATION
DATE: 6/8/88
TIME: 10:33 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 6/19/87
TIME: 10:42 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	259	238	225	208	34	30	214	236	109	119	105	117
AVE. SPEED (MPH)	57.05	56.90	57.06	56.81	57.03	57.53	56.60	56.86	56.82	56.45	56.38	57.27
STANDARD DEVIATION	4.983	4.865	5.090	4.946	4.267	4.281	5.326	4.856	5.425	4.904	5.237	4.792
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.4	0.	0.4	0.	0.	0.	0.5	0.	0.9	0.	0.	0.
PERCENT 44 MPH	1.9	0.8	2.2	1.0	0.	0.	1.4	0.4	0.9	0.8	1.9	0.
OF 49 MPH	4.6	5.9	5.3	6.7	0.	0.	7.0	5.9	6.4	7.6	7.6	4.3
VEHICLES 54 MPH	29.0	29.4	28.4	29.8	32.4	26.7	33.2	31.8	30.3	34.5	36.2	29.1
TRAVELING 59 MPH	72.6	73.9	72.0	73.6	76.5	76.7	72.4	73.7	69.7	79.0	75.2	68.4
LESS THAN 64 MPH	93.1	95.0	93.3	95.2	91.2	93.3	93.0	92.4	93.6	93.3	92.4	91.5
OR 69 MPH	99.2	99.2	99.1	99.0	100.0	100.0	99.1	99.6	99.1	99.2	99.0	100.0
EQUAL TO 74 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	133	116	124	104	9	12	117	107	60	53	57	54
AVERAGE SPEED	56.50	57.61	56.63	57.73	54.67	56.58	55.80	56.54	55.93	56.34	55.67	56.74
DIRECTION: SB												
# OF VEHICLES	126	122	101	104	25	18	97	129	49	66	48	63
AVERAGE SPEED	57.64	56.22	57.58	55.88	57.88	58.17	57.57	57.12	57.90	56.55	57.23	57.73

TABLE A13:SPEED DATA

STATION: 2L-79 HIGHWAY: SR 25 LOCATION: 0.7 MILE SOUTH OF AMERICUS

NO. OF LANES: 2 TYPE OF SURFACE: ASPHALT WEATHER: BRIGHT, CLEAR

THIS OBSERVATION
DATE: 8/1/88
TIME: 11:35 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 7/28/87
TIME: 10:17 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	324	275	308	263	16	12	198	205	125	130	73	75
AVE. SPEED (MPH)	56.22	55.92	56.34	56.00	53.81	54.08	55.17	55.79	55.71	56.12	54.23	55.21
STANDARD DEVIATION	4.630	3.928	4.575	3.785	5.167	6.273	4.011	4.051	4.103	3.999	3.691	4.104
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.4	0.	0.	0.	8.3	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.9	0.4	0.6	0.	6.3	8.3	0.5	0.5	0.8	0.8	0.	0.
OF 49 MPH	6.2	1.8	5.8	1.5	12.5	8.3	7.6	5.4	5.6	3.8	11.0	8.0
VEHICLES 54 MPH	35.8	35.6	34.7	35.4	56.3	41.7	40.9	38.0	36.0	36.9	49.3	40.0
TRAVELING 59 MPH	76.2	85.1	75.3	84.4	93.8	100.0	83.8	83.9	78.4	82.3	93.2	86.7
LESS THAN 64 MPH	96.0	97.5	96.1	97.3	93.8	100.0	99.0	99.5	98.4	99.2	100.0	100.0
OR 69 MPH	99.4	99.6	99.4	99.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EQUAL TO 74 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	156	146	144	137	12	9	92	115	61	72	31	43
AVERAGE SPEED	56.24	56.04	56.45	56.07	53.67	55.56	55.22	56.06	55.92	56.00	53.84	56.16
DIRECTION: SB												
# OF VEHICLES	168	129	164	126	4	3	106	90	64	58	42	32
AVERAGE SPEED	56.20	55.78	56.25	55.93	54.25	49.67	55.12	55.43	55.52	56.26	54.52	53.94

TABLE A14:SPEED DATA

STATION: 2L-91 HIGHWAY: SR 43 LOCATION: 2.0 MILES SOUTH OF CHALMERS

NO. OF LANES: 2 TYPE OF SURFACE: ASPHALT WEATHER: OVERCAST, BRIGHT

THIS OBSERVATION
DATE: 8/22/88
TIME: 10:23 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: 8/18/87
TIME: 9:45 AM

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	287	242	265	216	22	26	183	213	90	125	93	88
AVE. SPEED (MPH)	58.39	58.36	58.32	58.44	59.32	57.77	57.12	57.22	57.66	58.60	56.59	55.25
STANDARD DEVIATION	4.827	5.084	4.834	5.219	4.755	3.798	5.509	5.618	5.736	6.042	5.257	4.268
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	1.1	1.4	1.1	1.6	1.1	1.1
OF 49 MPH	2.4	2.1	2.6	2.3	0.	0.	8.2	4.7	5.6	3.2	10.8	6.8
VEHICLES 54 MPH	19.9	18.6	20.0	19.4	18.2	11.5	31.1	33.3	30.0	20.8	32.3	51.1
TRAVELING 59 MPH	59.6	66.9	61.1	65.3	40.9	80.8	68.9	69.5	64.4	60.8	73.1	81.8
LESS THAN 64 MPH	89.9	88.8	89.8	88.0	90.9	96.2	91.3	91.1	90.0	87.2	92.5	96.6
OR 69 MPH	98.3	96.7	98.1	96.8	100.0	96.2	98.9	98.1	97.8	96.8	100.0	100.0
EQUAL TO 74 MPH	99.7	98.8	99.6	98.6	100.0	100.0	100.0	99.5	100.0	99.2	100.0	100.0
79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	100.0	99.2	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	100.0	99.2	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DIRECTION: NB												
# OF VEHICLES	144	115	126	102	18	13	85	111	43	62	42	49
AVERAGE SPEED	58.92	58.25	58.80	58.29	59.78	57.92	58.25	57.01	58.19	57.98	58.31	55.78
DIRECTION: SB												
# OF VEHICLES	143	127	139	114	4	13	98	102	47	63	51	39
AVERAGE SPEED	57.86	58.46	57.88	58.56	57.25	57.62	56.13	57.44	57.17	59.21	55.18	54.59

TABLE A15:SPEED DATA

STATION: UI-ALL HIGHWAY: URBAN INTERSTATE

THIS OBSERVATION
DATE: MAY TO JUNE 1988

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: MAY TO JUNE 1987

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	744	530	589	399	155	131	462	516	239	251	223	265
AVE. SPEED (MPH)	60.52	60.43	60.34	60.55	61.22	60.08	59.16	57.75	60.24	58.20	57.99	57.33
STANDARD DEVIATION	4.471	4.635	4.567	4.760	4.028	4.231	4.150	3.889	4.179	3.951	3.797	3.788
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.4	0.4	0.4	0.4	0.4	0.4
OF 49 MPH	0.5	0.2	0.7	0.3	0.	0.	1.3	2.3	0.4	0.8	2.2	3.8
VEHICLES 54 MPH	7.3	6.8	8.5	7.3	2.6	5.3	13.0	17.4	8.8	14.7	17.5	20.0
TRAVELING 59 MPH	43.1	43.6	45.5	43.4	34.2	44.3	52.8	68.0	40.6	64.5	65.9	71.3
LESS THAN 64 MPH	83.9	84.3	84.0	83.5	83.2	87.0	91.3	96.5	85.8	95.6	97.3	97.4
OR 69 MPH	96.2	97.2	96.4	97.0	95.5	97.7	98.7	99.4	98.3	98.8	99.1	100.0
EQUAL TO 74 MPH	99.3	98.7	99.2	98.5	100.0	99.2	100.0	100.0	100.0	100.0	100.0	100.0
79 MPH	99.9	99.8	99.8	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	99.8	100.0	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE A16:SPEED DATA

STATION: RI-ALL HIGHWAY: RURAL INTERSTATE

THIS OBSERVATION
DATE: MAY TO AUGUST 1988

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: MAY TO AUGUST 1988

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	1195	972	640	560	555	412	780	897	392	442	388	455
AVE. SPEED (MPH)	62.92	64.44	62.50	63.94	63.40	65.13	61.43	61.32	61.86	62.90	60.99	59.78
STANDARD DEVIATION	4.722	4.416	4.705	4.553	4.699	4.130	4.517	4.864	4.820	4.985	4.150	4.212
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERCENT 44 MPH	0.	0.	0.	0.	0.	0.	0.1	0.1	0.	0.	0.3	0.2
OF 49 MPH	0.4	0.	0.5	0.	0.4	0.	0.3	0.6	0.3	0.7	0.3	0.4
VEHICLES 54 MPH	4.7	2.0	5.5	2.9	3.8	0.7	6.7	6.7	7.9	6.3	5.4	7.0
TRAVELING 59 MPH	22.2	13.1	24.7	16.1	19.3	9.0	31.7	36.7	28.6	22.6	34.8	50.3
LESS THAN 64 MPH	60.9	48.1	64.1	52.7	57.3	42.0	75.5	74.1	69.6	60.2	81.4	87.7
OR 69 MPH	92.7	88.9	93.9	90.0	91.4	87.4	96.8	95.7	95.2	93.4	98.5	97.8
EQUAL TO 74 MPH	99.6	98.8	99.8	98.9	99.3	98.5	99.4	99.6	99.2	99.3	99.5	99.8
79 MPH	99.9	100.0	99.8	100.0	100.0	100.0	99.9	99.9	99.7	99.8	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE A17:SPEED DATA

STATION: 4L-ALL HIGHWAY: 4-LANE

THIS OBSERVATION
DATE: MAY TO AUGUST 1988

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: MAY TO AUGUST 1987

		PASSENGER CARS						TRUCKS					
		ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION		LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES		1150	1054	889	801	261	253	818	783	481	459	337	324
AVE. SPEED (MPH)		59.08	59.24	58.58	59.18	60.75	59.42	57.49	57.26	57.68	57.34	57.21	57.14
STANDARD DEVIATION		5.281	5.020	5.087	5.049	5.588	4.929	5.148	4.743	5.437	4.869	4.699	4.564
	24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	39 MPH	0.	0.	0.	0.	0.	0.	0.	0.3	0.	0.	0.	0.6
PERCENT	44 MPH	0.5	0.6	0.4	0.6	0.8	0.4	1.0	0.3	0.8	0.	1.2	0.6
OF	49 MPH	2.8	2.4	3.4	2.6	0.8	1.6	5.4	3.8	5.4	3.7	5.3	4.0
VEHICLES	54 MPH	17.4	14.3	19.9	15.0	8.8	12.3	25.9	28.7	25.6	29.8	26.4	27.2
TRAVELING	59 MPH	55.1	52.5	57.9	51.8	45.6	54.5	67.6	69.5	68.2	68.4	66.8	71.0
LESS THAN	64 MPH	86.7	87.0	89.3	87.6	77.8	85.0	91.7	93.9	89.8	93.7	94.4	94.1
OR	69 MPH	97.0	97.3	98.7	97.5	91.6	96.8	98.4	98.9	97.3	98.5	100.0	99.4
EQUAL TO	74 MPH	99.2	99.4	99.6	99.4	98.1	99.6	99.6	100.0	99.4	100.0	100.0	100.0
	79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE A18:SPEED DATA

STATION: 2L-ALL HIGHWAY: 2-LANE

THIS OBSERVATION
DATE: JUNE TO AUGUST 1988

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: JUNE TO AUGUST 1987

		PASSENGER CARS						TRUCKS					
		ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION		LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES		1158	1014	1060	917	98	97	843	833	447	476	396	357
AVE. SPEED (MPH)		57.28	57.06	57.26	57.07	57.40	56.98	55.87	56.39	56.28	56.86	55.41	55.78
STANDARD DEVIATION		5.019	4.770	5.006	4.813	5.177	4.359	5.250	4.938	5.219	5.168	5.252	4.549
PERCENT OF VEHICLES TRAVELING LESS THAN OR EQUAL TO	24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	39 MPH	0.1	0.1	0.1	0.	0.	1.0	0.2	0.	0.2	0.	0.3	0.
	44 MPH	0.9	0.3	0.8	0.2	1.0	1.0	2.1	0.6	1.8	0.8	2.5	0.3
	49 MPH	4.5	3.6	4.6	3.8	3.1	2.1	10.2	6.1	7.6	5.9	13.1	6.4
	54 MPH	29.4	28.3	29.2	28.9	31.6	22.7	37.7	36.3	35.3	32.8	40.4	40.9
	59 MPH	68.3	75.2	68.5	74.5	66.3	82.5	76.5	76.7	72.7	73.9	80.8	80.4
	64 MPH	92.7	93.7	92.8	93.5	90.8	95.9	95.3	94.4	94.9	93.5	95.7	95.5
	69 MPH	98.5	98.4	98.5	98.4	99.0	99.0	99.5	99.2	99.3	98.7	99.7	99.7
	74 MPH	99.8	99.5	99.8	99.5	100.0	100.0	100.0	99.9	100.0	99.8	100.0	100.0
	79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.8	100.0	100.0
	84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.8	100.0	100.0
	89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE A19:SPEED DATA

STATION: ALL-14 HIGHWAY: URBAN INTERSTATE
RURAL INTERSTATE
4-LANE
2-LANE

THIS OBSERVATION
DATE: MAY TO AUGUST 1988

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: MAY TO AUGUST 1987

	PASSENGER CARS						TRUCKS					
	ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES	4247	3570	3178	2677	1069	893	2903	3029	1559	1628	1344	1401
AVE. SPEED (MPH)	59.92	60.21	59.26	59.66	61.89	61.88	58.34	58.31	58.72	58.84	57.90	57.69
STANDARD DEVIATION	5.374	5.511	5.262	5.439	5.220	5.391	5.321	5.111	5.503	5.472	5.069	4.580
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
39 MPH	0.	0.0	0.	0.	0.	0.1	0.1	0.1	0.1	0.	0.1	0.1
PERCENT 44 MPH	0.4	0.3	0.4	0.3	0.3	0.2	1.0	0.3	0.8	0.3	1.2	0.4
OF 49 MPH	2.2	1.8	2.7	2.1	0.7	0.7	4.8	3.2	4.0	3.1	5.7	3.4
VEHICLES 54 MPH	15.3	13.8	18.0	16.1	7.4	7.1	22.1	22.4	21.4	22.0	23.0	22.8
TRAVELING 59 MPH	47.4	46.9	52.5	50.8	32.2	35.1	58.2	61.5	55.3	57.0	61.5	66.7
LESS THAN 64 MPH	80.6	77.9	84.4	81.7	69.1	66.6	88.3	88.6	85.6	84.8	91.5	93.0
OR 69 MPH	96.1	95.3	97.2	96.2	92.7	92.8	98.3	98.1	97.5	97.2	99.3	99.1
EQUAL TO 74 MPH	99.5	99.2	99.6	99.2	99.2	99.1	99.7	99.8	99.6	99.8	99.9	99.9
79 MPH	100.0	100.0	99.9	100.0	100.0	100.0	100.0	99.9	99.9	99.9	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE A20:SPEED DATA

STATION: RURALL HIGHWAY: RURAL INTERSTATE
4-LANE
2-LANE

THIS OBSERVATION
DATE: MAY TO AUGUST 1988

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 121)
DATE: MAY TO AUGUST 1987

		PASSENGER CARS						TRUCKS					
		ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.	
OBSERVATION		LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT
NUMBER OF VEHICLES		3503	3040	2589	2278	914	762	2441	2513	1320	1377	1121	1136
AVE. SPEED (MPH)		59.79	60.18	59.01	59.50	62.00	62.19	58.19	58.42	58.44	58.96	57.88	57.77
STANDARD DEVIATION		5.538	5.650	5.378	5.535	5.390	5.509	5.502	5.321	5.667	5.699	5.286	4.744
	24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	39 MPH	0.	0.0	0.	0.	0.	0.1	0.1	0.1	0.1	0.	0.1	0.2
PERCENT	44 MPH	0.5	0.3	0.5	0.3	0.3	0.3	1.1	0.3	0.9	0.3	1.3	0.4
OF	49 MPH	2.5	2.0	3.2	2.5	0.8	0.8	5.4	3.4	4.6	3.5	6.3	3.3
VEHICLES	54 MPH	17.0	15.0	20.1	17.6	8.2	7.3	23.8	23.4	23.6	23.3	24.1	23.4
TRAVELING	59 MPH	48.2	47.5	54.0	52.2	31.8	33.5	59.2	60.2	58.0	55.6	60.7	65.7
LESS THAN	64 MPH	79.9	76.8	84.5	81.4	66.7	63.1	87.8	87.0	85.5	82.9	90.4	92.0
OR	69 MPH	96.1	95.0	97.4	96.0	92.2	92.0	98.3	97.8	97.3	96.9	99.4	98.9
EQUAL TO	74 MPH	99.5	99.2	99.7	99.3	99.0	99.1	99.7	99.8	99.5	99.7	99.8	99.9
	79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.9	100.0	100.0
	84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	100.0
	89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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